



Treated-Wood Precautions

By JOHN LELAND

At the Home Depot in Decatur, Ga., the signs over stacks of pressure-treated lumber warn, "Caution: Arsenic is in the pesticide applied to this wood." Arsenic is a poison known to cause cancer of the lungs, bladder and skin. Keith Forrester, a carpenter, paid little notice this week.

"I've known about the arsenic for a while," said Mr. Forrester, 21, loading his van with treated lumber. While he appreciated the warning, he had his doubts. "It doesn't seem like there are substantial reports about it," he said. "They're not saying exactly what it can do to you."

Besides, he added, what choice did he have? "When you're using wood outdoors, you need it treated. If not, it will rot."

Of the many problems facing homeowners these days, few are more perplexing than the one presented by pressure-treated wood, the material used in most wooden decks, play equipment and other outdoor structures. This wood has been associated with serious health problems and is at the center of a growing body of product liability litigation.

Researchers are divided on the risks, but agree that simple measures like tablecloths, sealants and common sense can reduce arsenic exposure. Few suggest throwing the deck out.

According to the American Wood Preservers Institute, a trade association, Americans last year bought about seven billion board feet of pressure-treated wood, or \$4 billion worth, most of it treated with a pesticide called chromated copper arsenate, or C.C.A.

The treatment kills termites and micro-organisms that cause decay. Yet, it also raises the specter of health risks, especially for young children. The Centers for Disease Control and Prevention lists arsenic as the toxic chemical posing the greatest threat to public health. In February, the industry agreed to start phasing C.C.A. out.

The Environmental Protection Agency is now studying the risks of C.C.A. — how much gets into the environment, how much gets into the body, how it affects cancer rates. "It's a surprisingly understudied area," said Steven Roberts, a toxicologist at the University of Florida, who headed a 2001 scientific panel to advise the agency.

Until the study is complete, the E.P.A. is offering no conclusions about any health problems caused by the wood treatment, said David Deegan, an agency spokesman. The Consumer Products Safety Commission is engaged in a similar study.

Since the late 1970's, environmental groups have pushed for a ban on C.C.A. In February, the industry, without quantifying the health risks of C.C.A., told the environmental agency it would stop treating wood with it for residential use after December 2003.

"We're reacting to a change in public perceptions," said Mel Pine, a spokesman for the treated-wood industry. He added that the product was safe if used properly.

Woods treated with other chemicals, including alkaline copper quat, known as A.C.Q., and copper azole, or C.A., have no arsenic but cost 15 to 30 percent more, said Ron Jarvis, the vice president for merchandise at the Home Depot. Redwood and cedar do not require pesticides.

Burning, sanding or sawing the C.C.A.-treated wood releases the arsenic as smoke, ash or sawdust. The environmental agency recommends never burning the treated wood and sawing or sanding outdoors, where there is ample ventilation.

Carpenters should wear gloves, goggles and a dust mask and wash all work clothes separately before wearing them again, the agency recommends.

The agency also recommends not allowing food or water to come into contact with the treated wood.

Arsenic in treated wood can form what are called "dislodgeable particles." Children playing on the wood can get the particles into their mouths. A small percentage can be absorbed through the skin.

The chemical also leaches into soil, where it can travel to mouths and skin. How big a problem is this? Researchers, again, are divided. One study, led by Helena Solo-Gabriele of the University of Miami, found that the soil under treated wood had 14 to 28 times as much arsenic as the soil around it.

A study of fruits and vegetables grown in arsenic-heavy soil, done for the Connecticut Agricultural Experiment Station, shows that certain types, notably mustard greens, retain high levels of arsenic. In other plants, including tomatoes and corn, the arsenic stays in the roots and stems. The study was led by David Stilwell, an analytical chemist.

The E.P.A. and environmental groups suggest a number of ways for consumers to protect themselves:

- Seal it: Painting or staining a deck or play equipment can immobilize most of the loose particles and stem at least some of the leaching. Stan Lebow, a research forest products technologist at the Forest Service Products Laboratory, recommended oil-based stains that penetrate the wood and do not require sanding or scraping, which stir up the arsenic. The sealant should be applied every year or two. Water-based sealants seem not to work.
- Cover it: Put a tablecloth on picnic tables.

- Don't overwash: Bleach and other oxidizing cleaners can release arsenic. They also convert the chromium in C.C.A. into its more toxic form, hexavalent chromium, which is the subject of the movie "Erin Brockovich."

- Lather: Wash hands after touching treated wood.

- Wipe it off: Amy Goldsmith, director of the New Jersey Environmental Federation, recommends keeping a towel by the door for wiping feet. If young children crawl on the deck or sit on pressure-treated wood benches, she recommends putting down a sheet or blanket.

- Line it: If you have wooden dividers in your garden, put a layer of plastic between the rails and the plants.

- Move it: Do not store children's toys under decks or allow children or animals to play there.

- Till: Arsenic stays close to the soil's surface. Turning the soil and covering it with topsoil or mulch reduces risk. However, John D. Schert, the executive director of the Florida Center for Solid and Hazardous Waste Management at the University of Florida, warns that some mulch has C.C.A.-treated wood in it. "Make sure you ask for virgin mulch," he said.

It is not necessary for people to be tested for arsenic poisoning unless they feel sick, Mr. Deegan of the E.P.A. said.

If you have questions, the National Pesticide Information Center, which is operated by the agency and Oregon State University, provides telephone access to a doctor, at (800) 858-7378. Hours are 9:30 a.m. to 7:30 p.m. Eastern Daylight Time, seven days a week.